Abstract

A thin film structure for a magnetic thin film recording medium including a dual seed layer of RuAl/NiAlB is disclosed. The use of the RuAl/NiAlB structure provides reduced grain size, an increased Mrt orientation ratio (OR), increased SNR and lower PW50 at higher amplitude. The RuAl and NiAlB seed layers each have a B2 crystallographic structure. The RuAl/NiAlB dual seed layer can be used to obtain an underlayer with a preferred in-plane orientation of (200) and a cobalt alloy magnetic film with the preferred in-plane orientation of (11$\bar{2}$0).